

Today's Topics:

1200 baud PSK modem
ARRL Propagation Forecast Bn Nr 49
Automatic satellite antenna tracking
Mac vs IBM
Meteor Showers
rec.scanners

Date: 13 Dec 89 17:44:59 GMT

From: idacrd!mac@princeton.edu (Robert McGwier)

Subject: 1200 baud PSK modem

Message-ID: <530@idacrd.UUCP>

>From article <8912121737.AA06579@nips.ssesco.com>, by elmquist@NIPS.SSESCO.COM:

>

> My understanding of the situation is this:

> 400 baud G3RUH PSK for telemetry

> 1200 baud G3RUH PSK for PACSAT or AO-13 voice transponder

> 9600 baud G3RUH FSK for UOSAT-D

>

> Am I close?

>

Close but NOT complete. What is AO-13 voice? In the U.S. there is available a 1200 BPS modem from TAPR, Inc. Tuscon, Az. It is decidedly superior to the G3RUH PSK modem BUT (1) it costs more, (2) it is harder to build though not ridiculously so, (3) the gain in BER over the G3RUH modem will not be needed if you are already using directional antennas. If you wish to be able to copy Microsats with an omni antenna with an acceptable bit error rate (BER) then the G3RUH is not the way to go. James is a good friend of mine, he has done an outstanding job in bringing a low cost modem to market for the masses but he took shortcuts that make its performance about 10 dB worse than the TAPR/W3IWI version. They are (1) He used a squaring loop (more on that in a moment before you jump on me) (2) HE HARD LIMITED THE SIGNAL AS IT 'COMES IN THE DOOR'. This latter lost him several dB but it made analog conditioning of the signal a breeze, there is NONE ;-). It is a bit harder to implement a good squaring loop than it is a Costas loop even though they are THEORETICALLY equivalent and the Costas takes more parts (and thus costs more). The bottom line is he was there first with a commercially available modem, it was and is cheap but it has a 10 dB implementation loss over the TAPR version for much less than a 10 dB increase in cost.

The hands down winner for copying and talking to UOSAT D is the G3RUH modem. He has done an outstanding job on that modem. No short cuts there and it is a winner. He has hundreds of those operating in the field and they are copying 9600 bps FSK now which is what UOSAT D uses as you mention.

There are new alternatives to the 400 bps, 1200 bps stuff coming out from Paccomm (also the source for the 9600 G3RUH in the states). It was announced in the AMSAT Journal. It does both in the same box. Call them for details.

The Microsat will operate 4800 bps PSK. There is but ONE modem that does this at present. That is the soon to be released DSP-232. A DSP based modem that will be coming soon to a dealer near you from AEA. It does all the modems you have mentioned above and more. I hope this doesn't sound to self serving since I designed it, just trying to keep you informed and you did ask ;-).

Bob

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My opinions are my own no matter		Robert W. McGwier, N4HY
who I work for! ;-)		CCR, AMSAT, etc.

Date: 13 Dec 89 19:46:21 GMT
From: victim.dec.com!reisert@decwrl.dec.com (Jim -- LTN1-2/H03 -- DTN 226-6905)
Subject: ARRL Propagation Forecast Bn Nr 49
Message-ID: <8912131946.AA00482@decwrl.dec.com>

In article <788@larry.sal.wisc.edu>, sde@larry.sal.wisc.edu (Scott Ellington) writes...

>Does anyone out there understand the wierd propagation we've had on 20
>Meters at night for the last week or so? The polar path is open, even
>though there's no sunlight there, but the Pacific path is dead. At the
>same time, the dark path to ZS6 is wide open.

What (zulu) time are you referring to? I worked the pacific (3D2XR on Rotuma) easily last night at 0450Z. I wish the polar path were better on 15, have heard XW8CW several times but he's too weak to work.

We have been having some solar disturbances lately, that might have something to do with it.

jim, AD1C

=====

"The opinions expressed here in no way represent the views of Digital Equipment Corporation."

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Littleton, MA 01460	

Date: 13 Dec 89 17:53:29 GMT
From: idacrd!mac@princeton.edu (Robert McGwier)
Subject: Automatic satellite antenna tracking
Message-ID: <531@idacrd.UUCP>

>From article <8912121730.AA06558@nips.ssesco.com>, by elmquist@NIPS.SSESCO.COM:
> Just wondering what the current "state of the art" is in automatic
> satellite antenna rotor controllers. I've heard about something
> called "The Kansas City Tracker" and seen ads for some stand-alone
> box of which the name escapes me. What I'm looking for is a controller
> than works with Quiktrak or the new Instant-Track... and preferably
> runs by itself without using the host CPU. Any one have any
> comments on this?

Yes I have comments on that as well. You are asking great questions especially from my point of view ;-). I wrote Quiktrak. Brooks and I designed the software interface for the Kansas City tracker and it is a plug in card for the PC BUT from the 'between the lines' of your question, I don't think you understand how it works. Forgive me if I am wrong and ignore what follows. It does use the CPU but IT DOES NOT PREVENT YOU FROM USING THE CPU TO DO OTHER JOBS WHILE IT ROTATES THE ANTENNAS! That was the purpose of the entire design, hardware and software. It is fired up on the timer interrupt in your PC, the interface is a TSR (terminatate and stay resident driver). Quiktrak loads a table and lets you quit quiktrak and go edit, run your terminal program, etc. while IN THE BACKGROUND in updates the antennas. He has a small accessory that adds onto the board which will also tune your radios from the input from Quiktrak. Instanttrack, the now and latest WOW available from the AMSAT software exchange has supplanted my Quiktrak as the 'latest and greatest' piece of tracking software. Their approach is slightly different. They do not load the table BUT they have their own TSR which fires up on the timer

interrupt and computes an AZ/EL point and then shoots it off to the Kansas city tracker interface. They cannot at this time support the automatic tuning of the radios but I understand and hope that they will in the near future. If you object to leaving your computer on in any way or if you don't own a PC compatible, then forgive my comments. I thought there might be others who were interested in the details.

Bob

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My opinions are my own no matter | Robert W. McGwier, N4HY
who I work for! ;-) | CCR, AMSAT, etc.

Date: 13 Dec 89 18:33:26 GMT
From: tellab5!chrz@uunet.uu.net (Peter Chrzanowski)
Subject: Mac vs IBM
Message-ID: <1862@tellab5.TELLABS.COM>

In article <8912060142.AA25869@apple.com>, k3mc@APPLE.COM (Mike Chepponis) writes:
> Actually, you can have the best of both worlds by getting a Mac and running
> a program called SoftPC on it. SoftPC completely emulates an XT machine
> (in software!), down to the comm ports, v20 processor compatibility, etc.
> Currently, SoftPC v1.3 has a Norton SI rating of 5.5 on my IICI, which is
> quite respectable.

Note: the Norton SI rating is notoriously poor as an indicator of a PC's speed (but unfortunately there IS no widely accepted, GOOD benchmark).

>
> SoftPC only runs on Mac II, IIX, IICx and IICI at this time, however, Insignia
> Solutions (the maker of SoftPC) promises support for the SE and Portable in
> a couple of months.
>

The SoftPC costs \$595. and requires 2MB of RAM and a hardisk with at least 3MB of available free space. On a Mac II it runs at PC/XT speeds; an SE would probably require an accelerator card to run even that fast.

COMMENTS: For \$595. you could BUY the actual PC hardware rather than simulate it on a MAC. Furthermore, SoftPC requires some rather expensive MAC hardware!

Modems, ports cards, IEEE-488 interface, A/D and D/A data acquisition and control, printers, plotters: these are all now available for MACs, but at MUCH higher prices than for PCs (try pricing a MAC parallel port card sometime!). PC accelerator cards are also relatively cheap, should you want performance significantly better than XT level.

Of course, if you're primarily MAC oriented, already own most or all of the required hardware, don't want to add any PC hardware, find XT performance adequate, and don't want another computer cluttering your workspace then SoftPC might be a good solution. In any case it does represent a 'tour de force' of the MAC's capabilities.

IMHO there are more fanatics in the MAC camp than in the PC camp, for some reason (NO, I am NOT accusing or suggesting that Mike Chepponis is a fanatic: his posting provided useful info). MACs are very nice for some uses and some users (although there are a few things PCs are better for, such as low level hardware hacking).

For me, the bottom line counts: PCs are cheaper and, for most tasks, the PC is adequate (a lot of application software runs about the same on either machine). That is, some of us would just as soon use a Chevy (Hyundai?) as a Porsche: the Porsche is more fun to drive but either vehicle will get you to work, and who wants to pay \$40K+ for a car?

Date: Wed, 13 Dec 89 15:44:15 EDT
From: Mike Owen W9IP <MROWEN%STLAWU.BITNET@CUNYVM.CUNY.EDU>
Subject: Meteor Showers

Regarding meteor showers...

There are several sources of information about VHF meteor scatter (or, if you prefer, meteor burst). If you are interested in how/when/why - type information, you might check out QST, June, 1986. If all you want to do is work 2m DX, try the ARRL Operating Manual.

BTW, the Quadrantids is NOT the biggest of them all, and in fact it's very easy to miss because its peak is so narrow. The Geminids (just past) are reasonably abundant but they are slow and consequently not too hot for DX. The Eta Aquarids, Perseids, and Orionids are by far the better

showers for 2m & up VHF DX.

QRZed meteors ...

Date: 13 Dec 89 19:01:37 GMT

From: msmith@topaz.rutgers.edu (Mark Robert Smith)

Subject: rec.scanners

Message-ID: <Dec.13.14.01.31.1989.2482@topaz.rutgers.edu>

NOTE: to rec.radio.shortwave readers: I have cross-posted this because it concerns rec.radio.shortwave users more than rec.ham-radio. I have also redirected followups to rec.radio.shortwave.

In article <16110@megaron.cs.arizona.edu> robert@cs.arizona.edu (Robert J. Drabek) writes:

> In article <37046@apple.Apple.COM>, chuq@Apple.COM (Chuq Von Rospach) writes:
> > MROWEN@STLAWU.BITNET (Mike Owen W9IP) writes:

> > >This is rec.Ham radio, after all. Scanner fans have every right to
> > >air their views, [but] discuss [it elsewhere]

> > If the ham radio folks don't want you scanner folks, then come on over to
> > rec.radio.shortwave. You're welcome to join us until you decide you want
> > your own group. (This is, in fact, one reason why rec.radio.shortwave
> > was created was to get away from just this attitude.
> > Chuq Von Rospach <+> chuq@apple.com <+> [This is myself speaking]

> NO! NO! NO!
> Rec.radio.shortwave was created to keep the noise level down or at least
> within a specific spectrum. Create a rec.radio.scanner if you want, I'd
> certainly vote a resounding yes, but we do not want our (shortwave)
> bandwidth chocked full scanner stuff, please. Most of us don't have the
> time to hit the ignore-article key too many times per day, and keeping
> things segregated helps a lot.

> If you want to continue reading the things in the ham group, that's
> why it's here.

> Robert J. Drabek

robert@cs.Arizona.EDU

Below follows the call for votes for rec.radio.shortwave, which as you will see specifically includes scanners, and any other radio receiving and monitoring, possibly including even TV!

In article <4170@amelia.nas.nasa.gov> chguest@pioneer.arc.nasa.gov (Charles J.

Guest) writes:

>(Does anyone out there have a copy of the orig. charter they can send
>me?).

Here's the first part of the "call for votes":

This is a formal call for votes for the proposed group
REC.RADIO.SHORTWAVE (originally rec.swl).

Purpose: to discuss all issues of interest to short wave listeners,
i.e. those who are interested in listening to programs on the
shortwave broadcast bands. Topics will include, but not be limited to,
program schedules, program recommendations, receiver reviews, dx news,
the politics of international broadcasting, information about
periodicals of interest, tips for improved reception, pirate and
clandestine station information, etc.

This group will also welcome articles on dx'ing other broadcast bands
(lw, mw, vhf-fm & tv), and on shortwave listening of non-broadcast
stations.

It is expected that this newsgroup will be gateway'd to the swl-l
mailing list (though a few details remain to be worked out).
[yeah, well, it's halfway working...]

Voting procedure:
[etc]

If you feel that rec.radio.shortwave should prohibit scanner
information, then either hold a vote in rec.radio.shortwave to see how
the majority feels, or hold a vote to create rec.radio.scanners so
that such traffic can move out of rec.radio.shortwave. I have no
objection to moving that traffic out of rec.radio.shortwave; I only
object to scanner enthusiasts being left without ANY newsgroup.

Mark

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